ing virus; lane 3, normal IgG; lanes 4 through 9, 4096 1024, 256, 64, 16, and 4 HA units virus, respectively.

(6*d*) Polyacrylamide-SDS gel analysis of the competition of WSN virus. Lane 1, no competing virus; lane 2, normal IgG; lanes 3 through 7, 4096, 1024, 256, 64 land 16 HA units virus, respectively; lane 8, ^{125}I WSN virus.

We claim:

1. A replicable microbial expression vehicle containing a promoter-operator sequence capable of expressing heterologous proteins in a microorganism, and a methionine codon followed by DNA encoding at least one antigenic determinant of human influenza hemagglutinin, wherein transcription of said DNA in a transformant microorganism is under control of said promoter-operator sequence, and wherein said DNA lacks the sequence of the prepeptide of the human influenza hemagglutinin.

2. A transformant microorganism comprising the expression vehicle according to claim **1**.

3. The expression vehicle according to claim **1**, wherein said promoter-operator sequence comprises a lac operon.

4. An expression vehicle according to claim **1** wherein said promoter-operator sequence comprises a tryptophan operon.

5. The expression vehicle according to claim **3** wherein said determinant comprises amino acids 1 to 396 of human influenza hemagglutinin protein fused via a methionine to the first 1,005 amino acids of the beta-galactosidase of the lac operon.

6. The expression vehicle acccording to claim **3** wherein said determinant comprises amino acids 59 to 211 of human influenza hemagglutinin protein fused to the first 1,005 amino acids of the beta-galactosidase of the lac operon.

7. The expression vehicle according to claim **4** wherein said determinant comprises amino acids 1 to 396 of human influenza hemagglutinin proteins fused via a methionine to amino acids 1 to 190 of said tryptophan operon.

8. The expression vehicle according to claim **4** wherein said determinant comprises amino acids 1 to 211 of human influenza hemagglutinin protein fused via a methionine to the first 190 amino acids of the polypeptide of said tryptophan operon.

9. The expression vehicle according to claim **3** wherein said determinant comprises amino acids 1 to 211 of human influenza hemagglutinin protein fused via a methionine to the first 1,005 amino acids of the beta-galactosidase of the lac operon.

10. The transformed microorganism *E. coli* comprising the expression vector of claim **1**.

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